***What can scientists learn from fossils?***

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*A paleontologist uses a special tool to extract a fossil.*

***How have the tools that scientists used changed over time?***

**Tools of the Fossil Hunter**

**The Study of Fossils**

Have you ever wondered how scientists learn about dinosaurs? Dinosaurs roamed Earth in prehistoric times. They have been extinct for millions of years. So how do we know so much about them?

One way scientists know about dinosaurs is through fossils. Fossils tell us what dinosaurs looked like and how they acted. Scientists look for fossils in the earth, dig them up, and study them. Almost everything we know about life from millions of years ago comes from the study of fossils.

**Fossil Hunters**

Scientists who study fossils are called paleontologists (pay-lee-ohn-TOL-uh-jists). A paleontologist’s job is like a detective’s job. Paleontologists look for clues that they can study to help them understand animals that lived long ago. For example, paleontologists can look at a dinosaur’s jaws and teeth to find out whether it was a good hunter. They can also study a footprint to find out the size of the dinosaur, how fast it move, and how much it weighed. Paleontologists can also study fossils to figure out when certain dinosaurs lived and died. Because dinosaurs have been extinct for millions of years, scientists look to fossils to provide them with a glimpse of the past.

So what are fossils? Fossils are the remains of plants and animals that lived long ago. Most fossils are formed from hard things, such as bones, shells, wood, or teeth. (Soft things – such as jellyfish, octopuses, and worms – normally don’t leave fossils because these animals don’t have any hard parts.) Fossils can also be the traces of animals, such as a footprint or the trail the animal left behind as it moved across the ground. Fossils can be as big as a house or as tiny as your fingernail.

However, not all dinosaurs become fossils. In fact, most dinosaurs decomposed or were eaten by other animals after they died. So they left no tract that they ever existed. To become a fossil, the dinosaur’s body had to be covered up by several layers of mud, sand, or other sediment. After thousands of years, all the pressure from the different layers turned the sediment into rock. Sometimes water leaked into the stone and ate away at the minerals inside the dinosaur’s bones, replacing them with other minerals. Then, over millions of years, the ancient rocks and fossils slowly moved up to the surface.



